

L Number	Hits	Search Text	DB	Time stamp
1	8	Radding NEAR charles	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/06 14:18
2	31	(US-6524856-\$ or US-6255113-\$ or US-6200812-\$ or US-6074853-\$ or US-5948653-\$ or US-5763240-\$ or US-5273881-\$ or US-6355412-\$ or US-5981175-\$ or US-5801030-\$ or US-5780296-\$ or US-5695977-\$ or US-5679523-\$ or US-5643763-\$ or US-5530191-\$ or US-4950599-\$ or US-4888274-\$ or US-5989879-\$).did. or (US-20030105039-\$ or US-20030082591-\$ or US-20020152494-\$ or US-20020094555-\$ or US-20020090361-\$ or US-20020061530-\$).did. or (WO-9937755-\$ or WO-9322443-\$ or US-5763240-\$ or WO-8701730-\$ or WO-9817827-\$).did. or (WO-200150847-\$ or WO-200009755-\$ or WO-9937755-\$).did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/06 14:29
-	3237	recombinase	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/03 14:24
-	49	homology WITH clamp	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/03 14:25
-	43116	(single NEAR strand\$5)OR (single-strand\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/03 14:26
-	27	recombinase and (homology WITH clamp) and ((single NEAR strand\$5)OR (single-strand\$5) )	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/03 14:31
-	25	(recombinase and (homology WITH clamp) and ((single NEAR strand\$5)OR (single-strand\$5) )) and (composition or kit)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/03 14:39
-	2	("5273881").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/03 14:43

=> d his

(FILE 'HOME' ENTERED AT 14:47:03 ON 03 OCT 2003)

FILE 'MEDLINE' ENTERED AT 14:47:14 ON 03 OCT 2003

L1 2714 S RECOMBINASE  
L2 105 S HOMOLOGY (L) CLAMP  
L3 523849 S SINGLE?  
L4 1 S L1 AND L2 AND L3  
L5 2 S L1 (S) L2  
L6 2 S L1 (L) L2  
L7 286 S L1 (L) L3  
L8 285 DUP REM L7 (1 DUPLICATE REMOVED)  
L9 285 S L8  
L10 109 S L8 AND PY<=1997

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED  
AT 14:52:47 ON 03 OCT 2003

L11 109 S L10  
L12 974 S L7  
L13 366 S L12 AND PY<=1997  
L14 0 S L13 AND CLAMP  
L15 92 S L13 AND HOMOLOG?  
L16 92 SORT L15 PY  
L17 12 S L16 AND PLASMID  
E ZARLING DAVID?/AU  
L18 55 S E2  
L19 5 S L18 AND L1  
L20 4 DUP REM L19 (1 DUPLICATE REMOVED)  
L21 4 SORT L20 PY

=> d an ti so au ab pi l21 1-4

L21 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:672567 CAPLUS

DN 129:271495

TI DNA sequence alterations by homologous recombination with  
**recombinase**-coated DNA

SO PCT Int. Appl., 127 pp.

CODEN: PIXXD2

IN Pati, Sushma; Zarling, David A.

AB The invention relates to methods for altering an endogenous DNA sequence, such as a chromosomal DNA sequence, by targeted homologous recombination. The method comprises introducing into a cell at least one **recombinase** and at least two single-stranded nucleic acids which are substantially complementary to each other, each nucleic acid also being substantially complementary to a preselected target DNA sequence. The method may be used for alteration of both prokaryotic and eukaryotic cell DNA. Thus, conversion of a .DELTA.F508 CFTR mutant to a normal CFTR was demonstrated in an immortalized CF tracheobronchial epithelial human cell line using recA-coated exon 11 with flanking intron sequence. A similar process was used to correct ornithine decarboxylase gene mutations in mouse zygotes. Mice produced from these zygotes were phenotypically normal. Alteration of plasmid DNA in Escherichia coli was also demonstrated using this method.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9842727	A1	19981001	WO 1998-US5223	19980316	
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5948653	A	19990907	US 1997-910367	19970813	
	US 2002090361	A1	20020711	US 1997-910415	19970813	
	AU 9865620	A1	19981020	AU 1998-65620	19980316	

EP 977771	A1	20000209	EP 1998-911735	19980316
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001518803	T2	20011016	JP 1998-545776	19980316
US 6200812	B1	20010313	US 1999-288586	19990408
US 2002108136	A1	20020808	US 2001-927160	20010809
US 2003105039	A1	20030605	US 2001-990433	20011120

5 ANSWER 13 OF 108 CAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1995:563142 CAPLUS  
 DN 123:278016  
 TI Homology requirements for ligation and strand exchange by the FLP  
**recombinase**  
 SO Journal of Biological Chemistry (1995), 270(19), 11646-53  
 CODEN: JBCHA3; ISSN: 0021-9258  
 AU Zhu, Xu-Dong; Pan, Guohua; Luetke, Karen; Sadowski, Paul D.  
 AB The FLP **recombinase** of the 2-.mu.m **plasmid** of  
 Saccharomyces cerevisiae belongs to the integrase family whose members  
 form a covalent bond between a conserved tyrosine of the  
**recombinase** and the 3'-phosphoryl group at the site of cleavage.  
 Ligation takes place when the 5'-OH generated during the cleavage step  
 attacks the phosphotyrosine bond and reforms a phosphodiester bond. When  
 the incoming 5'-OH is from the partner duplex, strand exchange occurs.  
 The FLP recognition target (FRT) contains two inverted 13-base pair (bp)  
 FLP binding sequences that surround an 8-bp core region. It has been  
 shown that heterol. in the core regins of the **recombinase** FLP  
 recognition target sites can dramatically impair recombination.  
 Therefore, it was of interest to study the homol. requirements of the core  
 sequence for FLP-mediated ligation. Using nicked duplex substrates contg.  
 mismatches in the core sequence, we have demonstrated that the FLP  
 ligation reaction can tolerate mismatches at all positions in the 8-bp  
 core except the position immediately adjacent to the cleavage site. Using  
 half-FRT substrates that contain a **single**-stranded core  
 sequence, we showed that 4 base pairs adjacent to the cleavage site in the  
 core are required for FLP to execute ligation with a **single**  
 -stranded oligonucleotide. FLP is also able to ligate the protruding  
**single** strand on a half-FRT site to the opposite strand to form a  
 hairpin. We have studied the effect of the base compn. of the protruding  
 8-nucleotide **single** strand upon the efficiency of hairpin  
 ligation. These studies revealed the importance of intrastrand  
 complementarity in the formation of hairpin by FLP. Hence we conclude  
 that the homol. in the position adjacent to the cleavage site is most  
 important, and the degree of the homol. required is dependent on the  
 nature of the ligation assay.

L5 ANSWER 16 OF 108 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 1993:33616 CAPLUS  
DN 118:33616  
TI Chromosomal insertion sites for phages and **plasmids**  
SO Journal of Bacteriology (1992), 174(23), 7495-9  
CODEN: JOBAAY; ISSN: 0021-9193  
AU Campbell, Allan M.  
AB A review with 50 refs. Bacteriophages insert their DNA into host chromosomes either through transposition (as in phage Mu) or through site-specific recombination (as in phage .lambda.). Whereas Mu can insert almost anywhere along the chromosome, .lambda. has a **single** highly preferred chromosomal site. Certain **plasmids** also insert into chromosomes by site-specific recombination. The site-specific **recombinases** used generally belong to the integrase family, whose members show some sequence homol. and conservation of reaction mechanism, indicating descent from a common ancestor. This minireview examines some chromosomal sites with known nucleotide sequences. The purpose is not to prep. an exhaustive catalog but to look for common trends. The focus is on chromosomal (attB) sites, not on the phage (attP) sites. Nevertheless, interpretation requires comparisons between the two, as well as some discussion of reaction mechanisms.